



Ul17/04-

Express Mail No.: EV452773457US

STATES PATENT AND TRADEMARK OFFICE

Application of: Scott Koenig, et al.

Confirmation No.: 1191

Application No.: 10/643,857

Group Art Unit: 1641

Filed: August 14, 2003

Examiner: To be assigned

For:

FcyRIIB-SPECIFIC ANTIBODIES AND Attorney Docket No.: 11183-010-999

METHODS OF USE THEREOF

(505421-999009)

Date: November 16, 2004

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.56 AND §1.97

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure imposed by 37 C.F.R. § 1.56 and § 1.97 to inform the Patent Office of all references coming to the attention of each individual associated with the filing or prosecution of the subject application, which are or may be material to the patentability of any claim of the application, Attorneys for Applicants hereby invite the Examiner's attention to the references A01-A16, B01-B05 and C01-C70 listed on the attached form PTO 1449 entitled "List of References Cited by Applicant." A copy of references B01-B05 and C01-C70 is provided herewith.

Identification of the listed references is not meant to be construed as an admission of Applicants or Attorneys for Applicants that such references are available as "prior art" against the subject application.

Applicants respectfully request that the references be made of record in the file history of the application.

No fee is believed due. However, should the Patent and Trademark Office determine otherwise, please charge any required fee to Jones Day Deposit Account No. 50-3013. A duplicate of this sheet is enclosed for accounting purposes.

Respectfully submitted,

Date:

November 16, 2004

Reg. No.)

JONES DAY

222 East 41st Street

New York, New York 10017

ATTY DOCKET NO. 11183-010-999 (505421-999009)

APPLICATION NO

10/643,857

APPLICANT

Scott Koenig and Maria Concetta Veri

FILING DATE

GROUP 1641

August 14, 2003

2003 16

U.S. PATENT DOCUMENTS

FERENCES CITED BY APPLICANT

MATTER		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A01	4,179,337	12/18/79	Davis et al.			
	A02	5,711,944	01/27/98	Gilbert et al.			
	A03	5,888,533	03/30/99	Dunn			
	A04	5,648,260	07/15/99	Winter et al.			
	A05	5,945,115	08/31/99	Dunn et al.			
	A06	6,019,968	02/01/00	Platz et al.			
	A07	6,132,764	10/17/00	Li et al.			
	A08	6,194,551	02/27/01	Idusogie et al.			
	A09	6,218,149	04/17/01	Morrison et al.			
	A10	2001/0036459	11/01/01	Ravetch			
	A11	6,339,069	01/15/02	Meers et al.			
	A12	2002/0028486	03/07/02	Morrison et al.			
	A13	6,420,149	07/16/02	Fukuda et al.			
	A14	6,472,511	10/29/02	Leung et al.			
	A15	6,528,624	03/04/03	Idusogie et al.			
	A16	2003/0115614	06/19/03	Kanda et al.			

FOREIGN PATENT DOCUMENTS

MATTER		DOCUMENT NUMBER	DATE	COUNTRY	CLA	SS SUBCLASS	TRANSL	ATION
							YES	NO
	B01	WO 94/18330	08/18/94	PCT				
	B02	EP 0 359 096	11/05/97	EPC				
	B03	WO 00/42072	07/20/00	PCT				
	B04	EP 0 343 950 B1	10/18/00	EPC				
	B05	WO 03/035835	05/01/03	PCT				1

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

C01	Abra et al. The next generation of liposome delivery systems: recent experience with tumor-targeted, sterically-stabilized immunoliposomes and active-loading gradients. J Liposome Res. 2002 Feb-May;12(1-2):1-3
C02	Bendas G, Immunoliposomes: a promising approach to targeting cancer therapy. BioDrugs. 2001;15(4):215-24.
C03	Billadeau et al., ITAMs versus ITIMs: striking a balance during cell regulation, J Clin Invest. 2002 Jan;109(2):161-8.
 C04	Bolland and Ravetch. Inhibitory pathways triggered by ITIM-containing receptors. Adv Immunol. 1999;72:149-177.
	Bolland et al. Genetic modifiers of systemic lupus erythematosus in FcgammaRIIB(-/-) mice. J Exp Med. 2002 May 6;195(9):1167-74
C06	Boruchov et al., Expression and modulation of the inhibitory Fcgamma receptor, FcgammaRIIb (CD32b), on human dendritic cells (DCs). Laboratory of Cellular Immunobiology, Department of Medicine, Memorial Sloan-Kettering Cancer Center, NY, NY 10021

	Brauweiler et al., Partially Distinct Molecular Mechanisms Mediate Inhibitory FcγRIIB Signaling In Resting and Activated B Cells, Journal of Immunology, 2001, 167: 204-211.
C08	Brown EJ. In vitro assays of phagocytic function of human peripheral blood leukocytes: receptor modulation and signal transduction. Methods Cell Biol. 1994;45:147-164
C09	Budde et al., Specificity of CD32 mAB for FcγRIIa, FcγRIIb1, and FcγRIIb2 expressed in transfected mouse B cells
	and BHK-21 cells, Leukocyte Typing V: White Cell Differentiation Antigens. 1995, 828-832. (Schlossman, Boumsell,
	Gilks, Harlan, Kishomoto, eds.)
	Callanan et al., The IgG Fc Receptor, FcyRIIB is a target for deregulation by chromosomal translocation in malignant lymphoma, PNAS, 2000 Jan. 97(1): 309-314.
C11	Cameron et al Differentiation of the human monocyte cell line, U937, with dibutyryl cyclicAMP induces the expression of the inhibitory Fc receptor, FcgammaRIIb. Immunol Lett. 2002 Oct 1;83(3):171-9.
C12	Camilleri-Broët et al., FcgammaRIIB is differentially expressed during B cell maturation and in B-cell lymphomas. British Journal of Haematology, 2004; 124:55-62
C13	Cassard et al., Modulation of tumor growth by inhibitory Fcgamma receptor expressed by human melanoma cells. The Journal of Clinical Investigation, 2002 November; 110(10):1549-1557
C14	Gi 1 . 1 . 1 . 1 . Gi . Gi . Gi . EC
	recombinant IgG1/IgG2 hybrid and point-mutated antibodies. Proc. Natl. Acad. Sci., USA, 1991 October;
	88(20):9036-9040
1	Clynes et al. Inhibitory Fc receptors modulate in vivo cytoxicity against tumor targets. Nat Med 2000 6(4): 443-6.
	Damle et al., B-cell chronic lymphocytic leukemia cells express a surface membrane phenotype of activated, antigen- experienced B lymphocytes. Blood 2002 June 1; 99(11):4087-4093
	Davies et al. Expression of GnTIII in a recombinant anti-CD20 CHO production cell line: Expression of antibodies with altered glycoforms leads to an increase in ADCC through higher affinity for FC gamma RIII. Biotechnol Bioeng. 2001 Aug 20;74(4):288-94
C18	Daëron et al., The Same Tyrosine Based Inhibition Motif, in the Intracytoplasmic Domain of FcγRIIB, regulates Negatively BCR, TCR- and FcR dependent Cell Activation, Immunity, 1995 Nov. 3: 635-646
C19	Eppstein et al. Biological activity of liposome-encapsulated murine interferon gamma is mediated by a cell membrane receptor. Proc Natl Acad Sci U S A. 1985 Jun;82(11):3688-92
C20	Fanger et al., Production and Use of Anti-FcR Bispecific Antibodies, Immunomethods 1994, 4: 72-81
C21	Farag, et al. FcyRIIIa and FcyRIIIa Polymorphisms Do Not Predict Response to Rituximab in B-Cell Chronic Lymphocytic Leukemia. Blood. 2003 Oct 16
C22	Fidler, I. J. (1985). "Macrophages and metastasisa biological approach to cancer therapy." Cancer Res 45(10): 4714-26.
C23	Gerber et al., Stimulatory and inhibitory signals originating from the macrophage Fcgamma receptors, Microbes Infect. 2001 Feb;3(2):131-9.
C24	Holmes et al. Alleles of the Ly-17 alloantigen define polymorphisms of the murine IgG Fc receptor. Proc Natl Acad Sci U S A 1985 Nov;82(22):7706-10
C25	Hwang et al. Hepatic uptake and degradation of unilamellar sphingomyelin/cholesterol liposomes: a kinetic study. Proc Natl Acad Sci U S A. 1980 Jul;77(7):4030-4
C26	Isaacs et al., Therapy with monoclonal antibodies. II. The contribution of Fegamma receptor binding and the influence of C _H 1 and C _H 3 domains on in vivo effector function. The Journal of Immunology, 1998; 161:3862-3869
C27	1 1 61 11 7 17 1000
C28	Kagari et ál., Essential Role of Fcgamma Receptors in anti-type II collagen antibody induced arthritis, J. Immunol. Apr. 2003 170: 4318-24
C29	Lifely et al. Glycosylation and biological activity of CAMPATH-1H expressed in different cell lines and grown under different culture conditions. Glycobiology. 1995 Dec;5(8):813-22
C30	Lin et al. Colony-stimulating factor 1 promotes progression of mammary tumors to malignancy. J Exp Med. 2001 193(6): 727-739.
C31	Lin et al The macrophage growth factor CSF-1 in mammary gland development and tumor progression. J Mammary Gland Biol Neoplasia 2002 7(2): 147-62.
C32	Lyden et al. The Fc receptor for IgG expressed in the villus endothelium of human placenta is Fc gamma RIIb2. J Immunol 2001 Mar 15;166(6):3882-9
C33	Malbec et al., Fce Receptor I-Associated lyn-Dependent Phosphorylation of Fcy Receptor IIB During Negative
C34	Regulation of Mast Cell Activation. J. of Immunology, 1998, 160: 1647-58. Maruyama K. In vivo targeting by liposomes. Biol Pharm Bull. 2000 Jul;23(7):791-9
C35	10 10 10 10 10 10 10 10 10 10 10 10 10 1
C36	Micklem et al., Different Isoforms of Human FcRII Distinguished by CDw32 Antibodies, Journal of Immunology, 1990 March, 144:2295-2303
C31	
	Type IV collagen: a novel murine model for Autoimmune Glomerular Basement Membrane Disease. J. Exp. Med. 2000 March 6: 191(5):899-905
C38	Norris et al., A naturally occurring mutation in FcgammaRIIA: A Q to K ¹²⁷ change confers unique IgG binding
	properties to the R ¹³¹ allelic form of the receptor, Blood 1998 January 15; 91(2):656-662

C39	Ott et al., Downstream of Kinase, p62dok, Is a Mediator of Fc\u00e3RIIB Inhibition of Fc\u00e4RI Signaling, J. of Immunology, 2002, 168: 4430-9.
C40	Park et al. Immunoliposomes for cancer treatment. Adv Pharmacol. 1997;40:399-435.
C41	Park YS. Tumor-directed targeting of liposomes. Biosci Rep. 2002 Apr;22(2):267-81
C42	Presta LG. Engineering antibodies for therapy. Curr Pharm Biotechnol. 2002 Sep;3(3):237-56
C43	Pricop et al. Differential modulation of stimulatory and inhibitory Fc gamma receptors on human monocytes by Th1 and Th2 cytokines. J Immunol. 2001 Jan 1;166(1):531-7
C44	Pulford et al. A new monoclonal antibody (KB61) recognizing a novel antigen which is selectively expressed on a subpopulation of human B lymphocytes. Immunology. 1986 Jan;57(1):71-6.
C45	Qin et al., Fcgamma receptor IIB on follicular dendritic cells regulates the B cell recall response. The Journal of Immunology. 2000; 164:6268-6275
C46	Ravetch and Bolland IgG Fc receptors. Annu Rev Immunol. 2001;19:275-290. Review
C47	Ravetch et al., Fc Receptors, Annu Rev Immunol. 1991;9:457-92
C48	Ravetch et al., Fc receptors: rubor redux. Cell. 1994 Aug 26;78(4):553-60.
	Ravetch et al., Immune inhibitory receptors Science. 2000 Oct 6;290(5489):84-9.
C50	Reali et al. IgEs targeted on tumor cells: therapeutic activity and potential in the design of tumor vaccines. Cancer Res 2001 61(14): 5517-22
C51	Routledge et al. The effect of aglycosylation on the immunogenicity of a humanized therapeutic CD3 monoclonal antibody. Transplantation. 1995 Oct 27;60(8):847-53
C52	Samuelsson et al., Anti-inflammatory activity of IVIG mediated through the inhibitory Fc receptor. Science, 2001 January 19; 291:484-486
C53	Sarkar et al., Negative signaling via FcgammaRIIB1 in B cells blocks phospholipase Cgamma2 tyrosine phosphorylation but not Syk or Lyn activation. The Journal of Biological Chemistry, 1996 August 16; 271(33):20182-20186
C54	Scholl et al Is colony-stimulating factor-1 a key mediator of breast cancer invasion and metastasis?" Mol Carcinog 7(4): 207-11.
C55	Shields et al. Lack of fucose on human IgG1 N-linked oligosaccharide improves binding to human Fcgamma RIII and antibody-dependent cellular toxicity. J Biol Chem. 2002 Jul 26;277(30):26733-40
	Sondermann et al. The 3.2-A crystal structure of the human IgG1 Fc fragment-Fc gammaRIII complex. Nature. 2000 Jul 20;406(6793):267-273
	Tam et al., A bispecific antibody against human IgE and human FcgammaRII that inhibits antigen-induced histamine release by human mast cells and basophils. Allergy 2004; 59:772-780
	Tao and Morrison, Studies of aglycosylated chimeric mouse-human IgG. Role of carbohydrate in the structure and effector functions mediated by the human IgG constant region. J Immunol. 1989 Oct 15;143(8):2595-601
	Todorovska et al. Design and application of diabodies, triabodies and tetrabodies for cancer targeting. J Immunol Methods. 2001 Feb 1;248(1-2):47-66. Review
	Tridandapani et al., Regulated Expression and Inhibitory Function of FcγRIIb in Human Monocytic Cells, Journal of Biol. Chem. 277(7): 50582-9.
	Umana et al. Engineered glycoforms of an antineuroblastoma IgG1 with optimized antibody-dependent cellular cytotoxic activity. Nat Biotechnol. 1999 Feb;17(2):176-80.
	Van Nguyen et al. Colony stimulating factor-1 is required to recruit macrophages into the mammary gland to facilitate mammary ductal outgrowth." Dev Biol 2002 247(1): 11-25.
	Van Sorge et al. FcγR polymorphisms: Implications for function, disease susceptibility and immunotherapy. Tissue Antigens 2003, 61:189-202
	Vingerhoeds et al. Immunoliposomes in vivo. Immunomethods. 1994 Jun;4(3):259-72.
	Wallick et al. Glycosylation of a VH residue of a monoclonal antibody against alpha (1-6) dextran increases its affinity for antigen. J Exp Med 1988 Sep 1;168(3):1099-109
	Warmerdam et al. Molecular basis for a polymorphism of human Fc gamma receptor II (CD32). J Exp Med. 1990 Jul 1;172(1):19-25
	Weinrich, V. Epitope mapping of new monoclonal antibodies recognizing distinct human FcRII (CD32) isoforms. Hybridoma 1996 Nov 2; Vol. 15:109-116
	Wright and Morrison, Effect of glycosylation on antibody function: implications for genetic engineering. Trends Biotechnol. 1997 Jan;15(1):26-32
	Xu et al., FcgRs Modulate Cytotoxicity of Anti-Fas Antibodies: Implications for Agonistic Antibody Based Therapeutics, Journal of Immunol. 2003, 171: 562-68.
C70	Xu et al., Residue at position 331 in the IgG1 and IgG4 C _H 2 domains contributes to their differential ability to bind and activate complement. The Journal of Biological Chemistry, 1994 February 4; 269(5):3469-3474

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.